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Investment insight

The coming end of LIBOR – Changes, choices and challenges

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- LIBOR rates will come to an end by the end of 2021
- Replacements for various LIBORs are mostly agreed, though their characteristics differ
- Attention is also focused on transitioning existing securities and contracts to the new rates

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LIBOR's retirement in the face of a changing world

Quotes for LIBOR (London Interbank Offered Rates), USD LIBOR, and other IBORs are planned to cease by the end of 2021. Most rates are expected to be replaced with new benchmarks, while Euribor (the Euro Interbank Offered Rate) is expected to undergo reform by the same date.

Why is this an issue? LIBOR reaches into every major sector of the world's financial markets and has been a widely-used family of benchmark interest rates for more than 30 years. During that time, millions of contracts and financial instruments, worth many hundreds of trillions of dollars, euros and pounds, among other currencies, have referenced some LIBOR rate. In mid-2018, the Bank for International Settlements estimated that about US$400 trillion worth of financial contracts used LIBOR in one of the major currencies as a reference rate. Some of the most liquid financial markets across the globe are therefore highly dependent on LIBOR.

LIBOR is used as a reference rate across a huge range of financial instruments, from floating rate notes (FRNs) to interest rate swaps and corporate loans, and it is not confined to the professional investment market either. Many residential mortgages and personal loans are linked to LIBOR, either directly or indirectly. The absence of a reliable short-term interest rate could create uncertainty in markets and risks to financial stability, though we believe this is an unlikely eventuality.

So why is LIBOR being brought to an end? LIBOR's problems stem from the revelations that, at times in the past and notably at critical junctures for financial markets, it was manipulated by some market participants for their own gain.[1] Throughout its existence, LIBOR was relied upon as a fair reflection of market interest rates, with that integrity upheld by the depth and competitiveness of the market. The manipulation scandals have tarnished its reputation, leading regulators and market participants to question its suitability as a set of benchmark rates.

Beyond the issues of manipulation, regulatory changes and banking sector reforms have also combined to reduce banks' use of the interbank lending market in recent years. In some cases, too few transactions are taking place at certain maturities to ensure a rate can be reliably estimated and calculated.

Agreeing replacement rates

The end of LIBOR raises a number of issues, not least what will replace it. Understandably, given the breadth of its market coverage and universal usage, until very recently there were few direct, robust competitors to LIBOR for the market to turn to.

The market has widely accepted that an appropriate risk-free reference rate (RFR) should be identified as the LIBOR replacement for each currency. Market participants in each of the affected regions have, with the help of regulators, considered a range of alternative rates that could act as an RFR replacement for LIBOR.

[1] Since LIBOR was (and still is) essentially calculated based on indicative quotes (submissions) from a panel of banks and not based on actual transactions, its calculation was open to abuse in an era of lax governance.

Some, such as those in the UK and US, have already chosen new RFRs. However, these differ from LIBOR in several important ways:

- Commonly-used LIBORs are forward-looking rates, meaning they apply to a period from the date of publishing to a date in the future, from overnight to 12-months. The chosen RFRs, in contrast, are backward-looking overnight rates – they are published based on transactions that occurred on the previous day.
- LIBOR has historically been a rate for borrowing between banks (the interbank market), so it reflects generic banking sector credit risk premia, hence it is not entirely free of credit risk.
- LIBOR is an unsecured borrowing rate. While some RFRs are also unsecured (for example, the new UK RFR), others, such as the new US RFR are secured. Unsecured borrowing is not backed by collateral that gives lenders recourse to something of value in the event the borrower defaults.
- LIBOR rates typically include a term premium for longer tenors. Longer-dated funding usually comes at higher rates, leading to an upward-sloping LIBOR curve. RFRs, being overnight rates, carry no term premium, though work is underway to develop term structures for the new sterling RFR, before LIBOR rates cease.

The new RFRs

Working groups in several jurisdictions have already identified their preferred RFR alternatives to LIBOR.

- **UK sterling – Sterling Overnight Index Average (SONIA)** – SONIA, an unsecured overnight rate, has existed for more than 20 years and is used in the sterling overnight indexed swaps (OIS) market. However, in light of the transition away from sterling LIBOR, the Bank of England reformed SONIA in 2018 to make it more robust and transparent. Unlike LIBOR, it is based on actual transactions and is calculated by the Bank of England.
- **US dollars – Secured Overnight Financing Rate (SOFR)** – The US RFR working group chose SOFR to sit alongside, and eventually replace, US$ LIBOR. SOFR has existed since 2014, though only officially published since April 2018. It is based on transactions in the Treasury repo market and therefore is a secured rate, representative of repurchase agreements which use Treasuries as collateral.
- **Euro – Euro short-term rate (€STR or ESTR) and Euribor** – The European Central Bank recently announced ESTR as the successor to the Euro overnight index average (EONIA), a short-term rate calculated in a similar fashion to LIBORs. ESTR is a new transactions-based unsecured overnight rate expected to be published later in 2019, reflecting wholesale overnight funding costs of Euro area banks. At the time of writing, European authorities plan to retain a reformed version of Euribor rather than replace it, but this may change in the future.
- **Japanese yen – Tokyo Overnight Average Rate (TONAR)** – The Bank of Japan decided to adopt TONAR, as the reference rate for yen overnight index swaps, to replace yen LIBOR. It is based on unsecured transactions.
- **Swiss francs – Swiss Average Rate Overnight (SARON)** – The Swiss National Bank identified SARON as a replacement and implemented that change in December 2017. SARON is a secured rate for the Swiss franc overnight repo market for which more than 20 years of historic data is available.

Complexities beyond the choice of replacement rate

Global consistency is not assured as the replacement rates differ in a number of important ways. These differences should be considered carefully when comparing or agreeing to transactions using RFRs.

Replacement risk-free rates

Region	RFR	Type
UK	SONIA	Unsecured
US	SOFR	Secured
Euro Area	ESTR/Euribor	Unsecured
Japan	TONAR	Unsecured
Switzerland	SARON	Secured

Source: M&G, as at July 2019

Secured versus unsecured: As noted above, the most significant difference between the replacement rates is that some are unsecured, while others are not. Secured rates are likely to be lower than unsecured ones, because a lender in a secured transaction has collateral backing it.

Rate determination and compounding: LIBORs are forward looking. This means interest on a LIBOR-based instrument is known well in advance of any payment date: a LIBOR rate on a 3-month FRN or loan is set at

the beginning of each 3-month coupon period. Thus far, FRNs using RFRs typically use an average of historical daily rates to determine interest payments during an interest period. Some use a simple average (common in the US), while others compound the daily rate (common in the UK). For loans, the situation remains less clear, with little deviation from LIBOR as yet, partly owing to their multi-currency nature.

Lag vs. Lockout: For practical reasons, investors and issuers need some advance notice of interest amounts before a payment date. This is likely to be important for issuers, and particularly borrowers in the leveraged finance markets, wanting to know the interest rates that will apply to their liabilities as precisely as possible, which also creates further support for the introduction of term rates. Different regions are currently using different means to achieve this. The emerging convention in the UK is a five-day lag approach whereby the coupon or interest period lags the reference rate observation period by five days, such that the last SONIA observation used in a coupon period is five days prior to the coupon payment date. In the US market, more SOFR-based securities are using a "lockout" approach: during the last 2-4 days of any coupon period, actual daily rates will be replaced by last rate observed before the 2-4 day lockout. For both these methodologies, coupons could therefore be slightly less than they theoretically should be in a rising rate environment as the higher rates at the end of the period may not be captured until the next period, if at all.

Fallback provisions and transitioning to the new rates

Most new FRN transactions incorporate terms that allow for a relatively smooth transition to the new rates once LIBOR has ceased. While transition may be relatively straightforward for these exposures, it is much more complex for older (in some cases very old) transactions. Some of these legacy transactions already contain fallback language that addresses the problem of what should occur if LIBOR is not available. However, most of these fallbacks are feasible only in the event LIBOR is temporarily unavailable. Often the fallback rate is the last available LIBOR quote, which would effectively turn floating rate notes into fixed rate instruments if LIBOR permanently disappeared, destroying value for investors if LIBOR rates are low relative to longer-term rates.

Fallback details for loans are usually slightly different but even greater problems arise where no fallback language exists, putting the market at risk of instability and disruption.

While a significant number of contracts currently outstanding will have matured or otherwise concluded by the time LIBOR ceases, many legacy transactions will remain in place. A straight switch to the new rate would not be appropriate as it would likely change the economics of any agreement. Determining the terms of the transition, including any adjustment spread intended to make the effects of transition neutral in present-value terms, will be critical. To date, there has been one existing FRN, issued by Associated British Ports, which went through a consent solicitation process to change from 3-month £ LIBOR + 2.5% to overnight SONIA + 2.65%. It represented a good test case for the market, showing the change is achievable, but the same process may not work for all legacy bonds.

Issuance of notes referenced to the new rates has been growing. As of the end of June 2019, there were £27.1 billion notional value outstanding in SONIA-linked notes, £20 billion of which had been issued in 2019. In the US market, there was US$124.8 billion of notional outstanding in SOFR-linked bonds, over US$100 billion of which were new this year.

Industry working groups across the world, as well as within the International Swaps and Derivatives Association (ISDA) in the case of derivatives, are working feverishly to determine the best processes and protocols to ensure a smooth and fair transition to the new RFRs. Attention will, undoubtedly, remain keenly focused on progress in these areas.

Fit for the future

As LIBOR is deeply woven into the fabric of financial markets, the industry is also working hard to understand the potential consequences the changes may have beyond the interest rates affecting securities and contract agreements. These may include, though not be limited to, such things as performance benchmarks for funds and investment strategies, or the introduction of mismatches in hedging strategies. Managing the transition from all the IBORs to their replacement rates as seamlessly as possible, in all cases looking after the interests and investments of clients, is the industry's goal.

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